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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/177,572	10/23/1998	YOSHIHIRO TERASHIMA	35.C13035	3325

5514 7590 12/03/2004

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NEW YORK, NY 10112

EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 12/03/2004

34

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/177,572

Applicant(s)

TERASHIMA ET AL.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Interview summary dated 18 August 2004, agreed to withdraw the office action sent on 25 June 2004 based on Suspension of action under 37 CFR 1.103(c) for a period of three months until 15 September 2004.
2. Interview summary dated 20 August 2004, the indicated allowability of claims 17 and 18 is withdrawn in view of the previously discovered references to Kuwata et al (US 5,900,857) in view of Iwasaki (US 4,745,485). Rejections based on the previously cited references follow.

Drawings

3. The drawing was received on 05/21/2004. This drawing is acknowledged and approved.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwata et al (US 5,900,857) in view of Iwasaki (US 4,745,485).
6. As to claim 17, Kuwata et al teach a memory controller comprising
a writing FIFO 2 (a first FIFO section, fig. 1) storing the image data of "a" x "2n"-
bit width, where "a" is a size of the inputted bit width, "n" is a positive integer number,

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and $2 \times "n"$ makes an even bit (see col. 13, lines 61-67, a capacity required for DRAM 3 is $3 \times 5 \times 138,240 = 2,073,600$ bits);

a DRAM 3 (a frame memory section, fig. 1), a reading FIFO 5 (a second FIFO section, fig. 1);

the writing FIFO 2 (the first FIFO section, fig. 1) is of a size suitable for storing image data so that, within a period for inputting the image data in the writing FIFO 2 (the first FIFO section, fig. 1) to FULL capacity (col. 13, lines 61-67, a capacity required for DRAM 3 is $3 \times 5 \times 138,240 = 2,073,600$ bits). A memory control section 9 (fig. 1) and a memory control section 4 (fig. 1) perform the function of writing the image data into the frame memory, reading out the image data from the frame memory and executing a command of frame memory section are conducted (see detail in col. 11, lines 59 through col. 12, lines 27).

Accordingly, Kuwata et al teaches all of the claimed limitations of claim 17, except for "...a serial/parallel conversion...wherein the image data is read out from...written into said frame memory section, and read out from said frame memory section, at a rate that is half of a rate at which the image data..."

However, Iwasaki teaches a related memory controller which includes a serial/parallel conversion 2 (see figure 1).

Further, Iwasaki teaches "more specifically, the writing time and the reading time for one frame are equal and in the reading operation, for the upper display are 11, the video signal of the frame being presently written is read out and for the lower display area 12, the video signal one frame ahead thereof is read out. Since the picture signal is

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applied to the driver 9 at a speed equal to a half of the writing speed to the frame memories 4 and 5" (see col. 5, lines 55-63), as best understood.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to substitute the serial/parallel conversion (2) taught by Iwasaki for Kuwata's frame modulation dither circuit (1) and to modify Kuwata's frame memory (DRAM 3) including half speed of write into and read out from the frame memory, in view of the teaching in Iwasaki's reference because these would provide the picture that is represented stably even if it is a moving picture as taught by Iwasaki (col. 5, lines 65-66).

7. As to claim 18, Iwasaki teach a liquid crystal panel 10, a decoder 31, and the memory controller 18 (see figure 7).

Response to Arguments

8. Applicant's arguments, see page 8, last new paragraph through page 9, filed 15 April 2004 have been fully considered but they are not persuasive.

9. In response to applicant's argument states specifically "the image data is read out from the frame memory 3 in half the rate of writing into the frame memory," recited in claim 17 at page 9. This argument is not persuasive because Iwasaki teaches "more specifically, the writing time and the reading time for one frame are equal and in the reading operation, for the upper display are 11, the video signal of the frame being presently written is read out and for the lower display area 12, the video signal one frame ahead thereof is read out. Since the picture signal is applied to the driver 9 at a speed equal to a half of the writing speed to the frame memories 4 and 5" (see col. 5,

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lines 55-63). These arguments are not persuasive because the modified teaching of Iwasaki's reference provides the "substantial evidence" and established a prima facie case to produce and result the claimed limitation "the image data is read out from the frame memory 3 in half the rate of writing into the frame memory."

10. Applicant's argument states "claim 17 is patentable over these two patents, taken separately or in any proper combination," at page 9, lines 5-6. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, examiner does provide a motivation at end of each obvious statement for combining references.

For these reasons, the rejections based on Kuwata et al and Iwasaki have been maintained.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

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Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
November 18, 2004


XIAO WU
PRIMARY EXAMINER